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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/666,356	09/19/2003	Stanley James Cartwright	NLF-0316	8184
27810	7590	01/24/2006	EXAMINER	
EXXONMOBIL RESEARCH AND ENGINEERING COMPANY P.O. BOX 900 1545 ROUTE 22 EAST ANNANDALE, NJ 08801-0900			THEXTON, MATTHEW	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/666,356	<b>Applicant(s)</b> CARTWRIGHT, STANLEY JAMES	
	<b>Examiner</b> Matthew A. Thexton	<b>Art Unit</b> 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities: In paragraphs 0016 and 0027 "TBN" is not explained. In Table 1 "NGEO" is not explained. In paragraph 0022, "VI" is not explained. If any of these are trademarks, they are subject to the requirements noted hereinbelow.

The use of the trademark "API" (paragraphs 0015 and 0026) has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology. Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks. The examiner suggests the incorporation of generic terminology for chemical materials into the specification. Applicant should note however, that the Examiner will allow amendment of the specification only when accompanied by a proper showing that the amended subject matter is what the trademarks represent, e.g., data sheets from manufacturer, with publication date prior to the earliest filing date.

Appropriate correction is required.

### ***Claim Objections***

Claims 3 and 8 are objected to because of the following informalities: "phosphorus" is misspelled. Appropriate correction is required.

***Claims Version***

The listing of claims as originally submitted has been examined.

***Claims Analysis***

Claim 1 is directed to a lubricating oil mixture comprising:

- (a) a major amount of a base oil of lubricating viscosity;
- (b) a combination of neutral and overbased metallic detergents;
- (c) about 0.00 to 0.15 vol % a zinc dialkyldithiophosphate and  
about 0.1 to 2.0 vol % of a zinc dialkyldithiocarbamate; and
- (d) about 0.5 to about 2.0 vol % an ashless dihydrocarbylthiocarbamoyl  
antioxidant, OR about 0.0 to about 1.9 vol % phenolic antioxidants,  
OR about 0.5 to 3.0 vol % of mixtures.

Dependent claims 2-5 further limit the types of dihydrocarbylthiocarbamoyl, the presence of phosphorus up to 0.008 weight %, the viscosity, the presence of conventional gas engine oil additives.

Independent claim 6 parallels claim 1, is directed to a method of enhancing the life of a lubricating oil by adding thereto the additives. Claims 7-10 parallel claims 2-5.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The basis on which to compute the sulfated ash has not been made clear; is it based on the total ash? On the composition prior to reducing to ash?

The basis "when used in gas engine" necessary for evaluating the enhanced life of the composition has been omitted in claims 6-10, thus both "enhanced" and "reduction" are undefined relative terms.

### **35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

### ***Claim Rejections***

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cartwright et al. (US 6140282A).

The present claims are broadly discussed hereinabove in the section ***Claims Analysis*** which is incorporated by reference. Applicant's claims are read to comprise component (a), component (b), component (c) consisting of about 0.1 to 2.0 vol % of a zinc dialkyldithiocarbamate, and 0.0 vol % component (d). Claim 2 further limits the type of dihydrocarbylthiocarbamoyl antioxidant but does not require it be present. Claim 3 encompasses zero phosphorus.

The reference '282 (cited by Applicant in paragraph 0026 of the specification) discloses gas engine lubricating oils with additives. The oil is suggested to be a group II basestock. Examples 2-7 do not require any ZDDP. '282 suggests metal dithiocarbamates as antiwear additive (column 7, lines 41-43). Mixtures of neutral and overbased detergents are suggested and exemplified. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed and optimized the amount of zinc dithiocarbamates as antiwear additive in a group II basestock oil having the exemplified detergents and 0.00 vol % of zinc dialkyldithiophosphate and 0.0 vol% of phenolic antioxidants, as encompassed by Applicant's claims. The viscosity would be inherent since the oil is of the same type. The inclusion of conventional additives (claims 5 and 10) would have been obvious to one of ordinary skill in the art at the time of the invention, and is suggested by '282.

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Applicant's Examples have been considered but they are not commensurate in scope with the claims which do not require any zinc dialkyldithiophosphate, nor any dihydrocarbylthiocarbamoyl antioxidant, nor any phenolic antioxidant, nor any of "balance of additive system."

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Thexton whose telephone number is 571-272-1125. The examiner can normally be reached on Tuesday-Friday, 9:30 to 7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasudevan S. Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Matthew A. Thexton  
Primary Examiner  
Art Unit 1714